

BELLY FAT BREAKTHROUGH

UNDERSTAND WHAT IT IS AND LOSE IT FAST

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Figure 1: Criteria for Body Mass Index (BMI) in Adults

Body Mass Index	Weight Classification
Less than 18.5	Underweight
Less than 16.0	Severe thinness
16.0 to 16.9	Moderate thinness
17.0 to 18.5	Mild thinness
18.5 to 24.9	Normal range
25.0 to 29.9	Pre-obese
30.0 or greater	Obese
30.0 to 34.9	Obese class I
35.0 to 39.9	Obese class II
40.0 or greater	Obese class III

Figure 2: International Diabetes Federation Criteria for Ethnic or Country-Specific Values for Waist Circumference

Risk category	Gender	Waist circumference
Europeans	Men	Greater than 37 inches
	Women	Greater than 31 inches
South Asian	Men	Greater than 35 inches
	Women	Greater than 31 inches
Chinese	Men	Greater than 35 inches
	Women	Greater than 31 inches
Japanese	Men	Greater than 35 inches
	Women	Greater than 31 inches

Figure 3

	Interval sprinting	Aerobic exercise	Resistance exercise
Range of total body fat loss	4.4 to 5.5 pounds	2.2 to 3.3 pounds	No change
Range of belly fat percentage loss	17 percent to 48 percent reduction	6 percent to 18 percent reduction	No change
Average waist circumference loss	1.4 inches	0.8 inches	No change
Average hours of exercise	12 hours	70 hours	36 hours

Summary of results of randomized, controlled studies examining the effects of aerobic exercise, resistance exercise, and interval sprinting on total fat and belly fat reduction.

Figure 4

Intervention	Weight loss	Fat-free mass loss/gain	Daily caloric decrease
LCD alone	-24.5 pounds	-6.8 pounds	50 percent
LCD with aerobic exercise	-25.1 pounds	-3.3 pounds	50 percent
LCD with resistance exercise	-25.6 pounds	-4.4 pounds	50 percent
ND with interval sprinting (female)	-3.3 pounds	+1.3 pounds	none
MD with interval sprinting	-4.2 pounds	+1.1 pounds	13 percent
ND with interval sprinting (male)	-3.3 pounds	+2.6 pounds	none

Comparison of muscle mass loss with no dieting (ND), moderate dieting (MD), and low-calorie dieting (LCD) with or without aerobic, resistance, and interval sprinting exercise.

Figure 5: Interval Sprinting Examples

	Before sprinting	Time of day: 6:00 a.m. to 8:00 a.m.	Pedal rate and resistance	Information recorded
Monday	Drink water or green tea	20 minutes of LifeSprints	90 rpm at 1.1 pounds, 50 rpm recovery	Weight and fat, exercise heart rate, and RPE
Wednesday	Drink water or green tea	20 minutes of LifeSprints	90 rpm at 1.1 pounds, 50 rpm recovery	Exercise heart rate and RPE
Friday	Drink water or green tea	20 minutes of LifeSprints	90 rpm at 1.1 pounds, 50 rpm recovery	Exercise heart rate and RPE

A morning workout (light)

	Before sprinting	Time of day: 12:00 p.m. to 2:00 p.m.	Pedal rate and resistance	Information recorded
Monday	Fast for 2–3 hours and drink water or green tea	20 minutes of LifeSprints	115 rpm at 2.2 pounds, 75 rpm recovery	Weight and fat, exercise heart rate, and RPE
Wednesday	Fast for 2–3 hours and drink water or green tea	20 minutes of LifeSprints	115 rpm at 2.2 pounds, 75 rpm recovery	Exercise heart rate and RPE
Friday	Fast for 2–3 hours and drink water or green tea	20 minutes of LifeSprints	115 rpm at 2.2 pounds, 75 rpm recovery	Exercise heart rate and RPE

A lunchtime workout (moderate)

	Before sprinting	Time of day: 6:00 p.m. to 8:00 p.m.	Pedal rate and resistance	Information recorded
Monday	Fast for 2–3 hours after evening meal and drink water or green tea	20 minutes of LifeSprints	125 rpm at 3.3 pounds, 85 rpm recovery	Weight and fat, exercise heart rate, and RPE
Wednesday	Fast for 2–3 hours after evening meal and drink water or green tea	20 minutes of LifeSprints	125 rpm at 3.3 pounds, 85 rpm recovery	Exercise heart rate and RPE
Friday	Fast for 2–3 hours after evening meal and drink water or green tea	20 minutes of LifeSprints	125 rpm at 3.3 pounds, 85 rpm recovery	Exercise heart rate and RPE

An evening workout (hard)

Figure 6

How's your diet?

Use this questionnaire to assess your general diet and find out what changes you might need to make to help reduce the amount of belly fat you carry. Answer the questions below with regard to your typical eating patterns by filling in a score between 1 and 4 for each question and then add up your total.

1 = Not at all 2 = Sometimes

3 = Fairly regularly 4 = All the time

1. I eat junk food every day
2. I drink at least one soft drink every day
3. I eat sugary food such as cakes and sweets daily
4. I eat fried food every day
5. I eat fruit every day*
6. I eat vegetables everyday*

TOTAL



*** Reverse the scoring for questions 5 and 6:**

4 = Not at all 3 = Sometimes

2 = Fairly regularly 1 = All the time

Interpreting your score:

6 to 9 points: low levels of processed food

10 to 12 points: moderately low levels of processed food

13 to 18 points: moderately high levels of processed food

19 to 24 points: high levels of processed food

Figure 7: Mediterranean Eating Score

Diet component			
Beneficial components	Average (per day)	The Mediterranean eating plan recommends	Score
Detrimental components	Average (per day)	The Mediterranean eating plan recommends	Score
Vegetables	500 grams	5 average-sized servings	
Legumes	7 grams	1 cup	
Fruits and nuts	360 grams	4 pieces of fruit and a handful of nuts	
Cereals	140 grams	1 bowl of cereal	
Monounsaturated: saturated fat ratio	1:7		
Meat and poultry	90 grams	Less than 1 chicken breast	
Dairy products	190 grams	Less than 1 glass of milk and 1 yogurt	
Alcohol consumption *14.4 ounces in a schooner and 19.3 ounces in a pint	5 to 25 grams	Less than 2 schooners of beer*	

Interpreting your score:

0 to 2 points: low levels of Mediterranean eating

3 to 4 points: moderately low levels of Mediterranean eating

5 to 6 points: moderately high levels of Mediterranean eating

7 to 8 points: high levels of Mediterranean eating

Figure 8: Sample Mediterranean Recipes

Breakfast

Scrambled Eggs and Toast

A good Mediterranean breakfast is scrambled eggs on whole grain toast. Butter or margarine should not be used on the toast. Going without butter may be difficult, but coconut or nut butter can be used as a healthy substitute. This meal can be followed by whole fruit such as an orange or a slice of melon. Drink unsweetened Sencha green tea, black tea, coffee, or water; do not drink fruit juice, as it contains high concentrations of fructose.

You will need:

2 eggs

1 tablespoon low-fat or skim milk

1 teaspoon freshly ground black pepper or spice of your choice

Method:

1. Beat the eggs with the milk and freshly ground black pepper.
2. Pour mixture into a heated nonstick fry pan and scramble until done.
3. Serve scrambled eggs on whole grain toast.

Fruit, Nuts, and Yogurt

This breakfast is quick to prepare and can contain a range of fruit and nuts. The yogurt should be nonfat or low-fat Greek.

You will need:

$\frac{1}{2}$ cup to 1 cup fruit of your choice, such as banana, melon, berries, mango, apple, or pear

$\frac{1}{2}$ cup low-fat, low-sugar, or sugar-free yogurt

$\frac{1}{2}$ cup raw, unsalted nuts of your choice, such as almonds, cashews, or hazelnuts, chopped

Method:

1. Chop larger fruit into smaller pieces, but keep fruit whole whenever possible. Place fruit in a cereal bowl.

2. Cover fruit with yogurt. Sprinkle chopped raw nuts over the yogurt.

Cereal and Fruit (Serves 2)

As most commercial cereals contain lots of sugar, it is best if you make your own. Adding blueberries, chopped bananas, and peaches to a healthy homemade cereal creates a great breakfast. Use low-fat milk, but if you don't like cow's milk, try a nondairy milk such as coconut, rice, or soy. If you don't want any milk, add fresh fruit and yogurt.

You will need:

2 tablespoons sunflower seeds

4 tablespoons sliced almonds

2 tablespoons nuts of your choice, such as almonds, cashews, or hazelnuts, chopped

1½ cups rolled oats

2 tablespoons sultanas or your preferred dried fruit

1 teaspoon cinnamon

Method:

1. Place sunflower seeds, sliced almonds, chopped nuts, and rolled oats in a bowl and mix well.
2. To sweeten, add the sultanas and cinnamon.
3. Serve with low-fat milk or yogurt and top with the fruit of your choice.

Lunch

Curried Vegetables

Any vegetable can be used in this recipe; however, harder vegetables such as carrots and potatoes should be precooked.

You will need:

1 tablespoon olive oil

1 cup mixed vegetables such as asparagus, onions, potatoes, carrots, broccoli, peas, and capsicum, chopped

2 eggs

1 teaspoon curry powder

Method:

1. Place olive oil in a frying pan over medium heat. Add vegetables and stir-fry for 3 minutes.
2. Beat the eggs in a bowl and add curry powder.
3. Add eggs to the vegetables and cook for 3 minutes, stirring occasionally until the eggs are cooked.

Spicy Burrito (Serves 4)

Beans are extremely healthy (if you buy the canned, salt-free variety) and quick to prepare. Multiple toppings can be used to generate many different flavors, and this burrito can be spiced up by adding chili powder and cayenne pepper.

You will need:

1 tablespoon olive oil

1 onion, chopped

1 red capsicum, chopped

14-ounce can salt-free kidney beans or mixed beans

1 clove garlic, crushed

$\frac{1}{4}$ teaspoon chili powder

$\frac{1}{4}$ teaspoon cayenne pepper

$\frac{1}{2}$ cabbage, shredded

1 tomato, diced, seeds removed

$\frac{1}{2}$ red onion, diced

1 teaspoon coriander, chopped

1 teaspoon lime juice

freshly ground black pepper, to taste

1 tablespoon low-fat sour cream

4 tortillas

Method:

1. Put olive oil in a frying pan and place over medium heat.
2. Sauté onion and capsicum for 5 minutes, turning occasionally, until soft and onion is transparent.
3. Add beans, garlic, chili powder, and cayenne pepper, and sauté for another 10 minutes.
4. Meanwhile, place cabbage, tomato, red onion, coriander, lime juice, black pepper, and sour cream in a bowl and mix thoroughly. Heat tortillas in the oven.
5. Divide the bean mixture between the tortillas and top with the cabbage salsa; then roll each tortilla to create the burritos.

Dinner

Roasted Salmon with Asparagus

This meal combines healthy salmon with asparagus.

You will need:

2 tablespoons macadamia nuts, crushed

2 tablespoons coriander, chopped

1 tablespoon coconut butter

1 teaspoon lemon zest

6-ounce piece of fresh salmon

freshly ground black pepper, to taste

6 asparagus spears

1 tablespoon olive oil

1 tablespoon Parmesan shavings

Lemon slices, to serve

Method:

1. Preheat the oven to 450°F.
2. Combine macadamia nuts and coriander in a bowl. Add the coconut butter and lemon zest and mix well.
3. Place salmon on a tray, skin side down, and season with freshly ground black pepper. Spread macadamia and coriander mix thickly over the salmon flesh. Place in the oven and roast for 12 to 16 minutes, until just cooked.
4. While your salmon is roasting, preheat the grill to medium. Place asparagus spears on a baking tray, drizzle with olive oil, and place under the grill for 3 to 4 minutes.
5. Place asparagus spears on a plate and cover with Parmesan shavings and freshly ground black pepper. Place the salmon fillet on top of the asparagus spears and garnish with lemon slices.

Lemon Caper Chicken

Serve this meal with sautéed whole greens of your choice.

You will need:

1 small chicken breast, trimmed of all fat

Freshly ground black pepper, to taste

1 clove garlic, crushed

1 tablespoon olive oil

Zest and juice of half a lemon

$\frac{1}{4}$ cup chicken stock

$\frac{1}{2}$ cup couscous

$\frac{1}{4}$ cup fresh parsley leaves, chopped

2.3 ounces cherry tomatoes, quartered

1 tablespoon capers, drained

1 spring onion, sliced

Method:

1. Place chicken breast, pepper, garlic, and olive oil in a shallow dish and mix together.
2. Heat a medium saucepan over medium-high heat and then add the chicken mixture. Cook for 2 to 3 minutes while tossing the mixture until almost cooked. Transfer to a plate and keep warm by covering the plate with foil.
3. Increase heat to high and add lemon juice and stock. Cook until the liquid comes to a boil and then remove the saucepan and add couscous. Make sure none of the mixture sticks to the bottom of the pan. Cover and let stand for 2 to 3 minutes.
4. Now add the chicken, parsley, tomatoes, capers, onion, and lemon zest. Combine and serve.

Figure 9

Measuring your daily stress

The amount of daily stress in your life can be assessed in the test below. If you score more than 20 points, you have high levels of stress and need to take action to reduce your daily stress levels. Answer the six questions using a score of 1 to 4 for each question, and then add up your total.

1 = Not at all 2 = Sometimes

3 = Fairly regularly 4 = All the time

1. I worry about personal problems in my life every day
2. My personal problems interfere with my job and relationships
3. I constantly feel that things in my life are out of control
4. I feel the stress in my life affects my health
5. I find the stress in my life disrupts my sleep
6. I often feel anxious and irritable during the day

TOTAL

Interpreting your score:

6 to 9 points: low levels of daily stress

10 to 12 points: moderately low levels of daily stress

13 to 18 points: moderately high levels of daily stress

19 to 24 points: high levels of daily stress

Figure 10

Measuring the quality of your sleep

The quality of your sleep can be assessed by using the test below. Answer the six questions, using a score of 1 to 4 for each question, and then add up your total. If you score less than 4 points, then you have poor-quality sleep and need to take action to improve your sleep.

1 = Not at all 2 = Sometimes

3 = Fairly regularly 4 = All the time

1. I have difficulty falling asleep within fifteen minutes
2. I wake up in the middle of the night or early morning
3. I constantly feel too hot or too cold in bed
4. I wake up too early and can't get back to sleep
5. I regularly have bad dreams
6. On waking, I feel tired and do not feel refreshed

TOTAL

Interpreting your score:

6 to 9 points: good-quality sleep

10 to 12 points: moderately good-quality sleep

13 to 18 points: moderately poor-quality sleep

19 to 24 points: very poor-quality sleep



Figure 11: Example of Lower- and Upper-Body Interval Sprinting Program at Light Intensity

	Before sprinting	Time of day: 6:00 a.m. to 8:00 a.m.	Pedal rate and resistance	Information recorded
Monday	Drink water or green tea	20 minutes LifeSprints on the bike	90 rpm at 0.5 kg, with 50 rpm recovery	Weight and fat, exercise heart rate, and RPE
Tuesday	Drink water or green tea	20 minutes rowing, skipping, or boxing	See page 91	Exercise heart rate and RPE
Wednesday	Drink water or green tea	20 minutes LifeSprints on the bike	90 rpm at 0.5 kg, with 50 rpm recovery	Exercise heart rate and RPE
Thursday	Drink water or green tea	20 minutes rowing, skipping, or boxing	See page 94	Exercise heart rate and RPE
Friday	Drink water or green tea	20 minutes LifeSprints on the bike	90 rpm at 0.5 kg, with 50 rpm recovery	Exercise heart rate and RPE
Saturday	Rest day			
Sunday	Drink water or green tea	20 minutes rowing, skipping, or boxing	See page 96	Exercise heart rate and RPE

Figure 12: Sample Week of Mediterranean Eating Plan

	Breakfast	Lunch	Dinner
Monday	Scrambled egg on toast; green or black tea, or water; 1 piece of whole fruit	Curried vegetables green or black tea, or water; mixed fruit	Roasted salmon and asparagus; wine*; dark chocolate; fruit, nuts
Tuesday	Fruit salad with yogurt; green or black tea, or water	Spicy burrito green or black tea, or water; mixed fruit	Lemon caper chicken with couscous; wine; fruit
Wednesday	Cereal with fruit; green or black tea, or water	Fish tacos with avocado and salsa; green or black tea, or water; mixed fruit	Shrimp and vegetable quinoa fried rice; wine; fruit, nuts
Thursday	Scrambled egg on toast; green or black tea, or water; 1 piece of whole fruit	Tahini tuna salad; green or black tea, or water; mixed fruit	Tandoori chicken with fresh vegetables and rice; wine; fruit
Friday	Fruit salad with yogurt; green or black tea, or water	Garden vegetable wrap; green or black tea, or water; mixed fruit	Grilled halibut with avocado sauce; wine; fruit, nuts
Saturday	Cereal with fruit; green or black tea, or water	Black bean salad; green or black tea, or water; mixed fruit	Steak stir-fry with vegetables; red wine; dark chocolate; fruit
Sunday	Fruit salad with yogurt; green or black tea, or water	Satay chicken with steamed vegetables; green or black tea, or water; mixed fruit	Cod poached in tomato sauce with spinach, capers and pine nuts; wine; fruit, nuts

**Limit is 1 glass for women and 2 for men*

Appendix A: The Cooper Twelve-Minute Walk/Run Fitness Test

This twelve-minute fitness test is a convenient way to assess aerobic fitness. The test assumes that there is a reasonable relationship between the distance a person can run or walk in twelve minutes and his or her maximum aerobic fitness. The aerobic values achieved through this easy field test can be compared with those of people of the same age and gender. Test results, however, are affected by motivational factors; thus, being less or more motivated to run or walk could influence test results.

To perform the Cooper Twelve-Minute Walk/Run Fitness Test, you have to run or walk as far as you can in twelve minutes. It is usually completed on a running track, and a stopwatch is required to make sure that you walk/run for twelve minutes exactly. This test can be demanding, so make sure you have a physician's clearance.

First, warm up for eight to ten minutes, and then run or walk as far as you can in twelve minutes. After you have completed the test, compare your results with the norms below.

Age	Excellent	Above Average	Average	Below Average	Poor
Males 20 to 29	Greater than 1.7 miles	1.5 to 1.7 miles	1.4 to 1.5 miles	1.0 to 1.4 miles	Less than 1.0 mile
Males 30 to 39	Greater than 1.7 miles	1.4 to 1.7 miles	1.2 to 1.4 miles	0.9 to 1.2 miles	Less than 0.9 mile
Males 40 to 49	Greater than 1.6 miles	1.3 to 1.6 miles	1.1 to 1.3 miles	0.9 to 1.1 miles	Less than 0.9 mile
Males 50 and older	Greater than 1.5 miles	1.2 to 1.5 miles	1.0 to 1.2 miles	0.8 to 1.0 miles	Less than 0.8 mile
Females 20 to 29	Greater than 1.7 miles	1.4 to 1.7 miles	1.1 to 1.4 miles	0.9 to 1.1 miles	Less than 0.9 mile
Females 30 to 39	Greater than 1.6 miles	1.2 to 1.6 miles	1.1 to 1.2 miles	0.9 to 1.1 miles	Less than 0.9 mile
Females 40 to 49	Greater than 1.4 miles	1.2 to 1.4 miles	0.9 to 1.2 miles	0.8 to 0.9 miles	Less than 0.8 mile
Females 50 and older	Greater than 1.4 miles	1.1 to 1.4 miles	0.9 to 1.1 miles	0.7 to 0.9 miles	Less than 0.7 mile

Appendix B: Submaximal Aerobic Fitness Test

Male					
Name:			Date:		
	Pedal rate	Pedal resistance	Heart rate	RPE	Collection time
Stage 1 4 minutes	60 rpm	2.2 pounds			At end of stage
Stage 2 3 minutes	60 rpm	3.3 pounds			At end of stage
Stage 3 3 minutes	60 rpm	4.4 pounds			At end of stage
Cool-down 4 minutes	40 rpm	1.1 pounds			

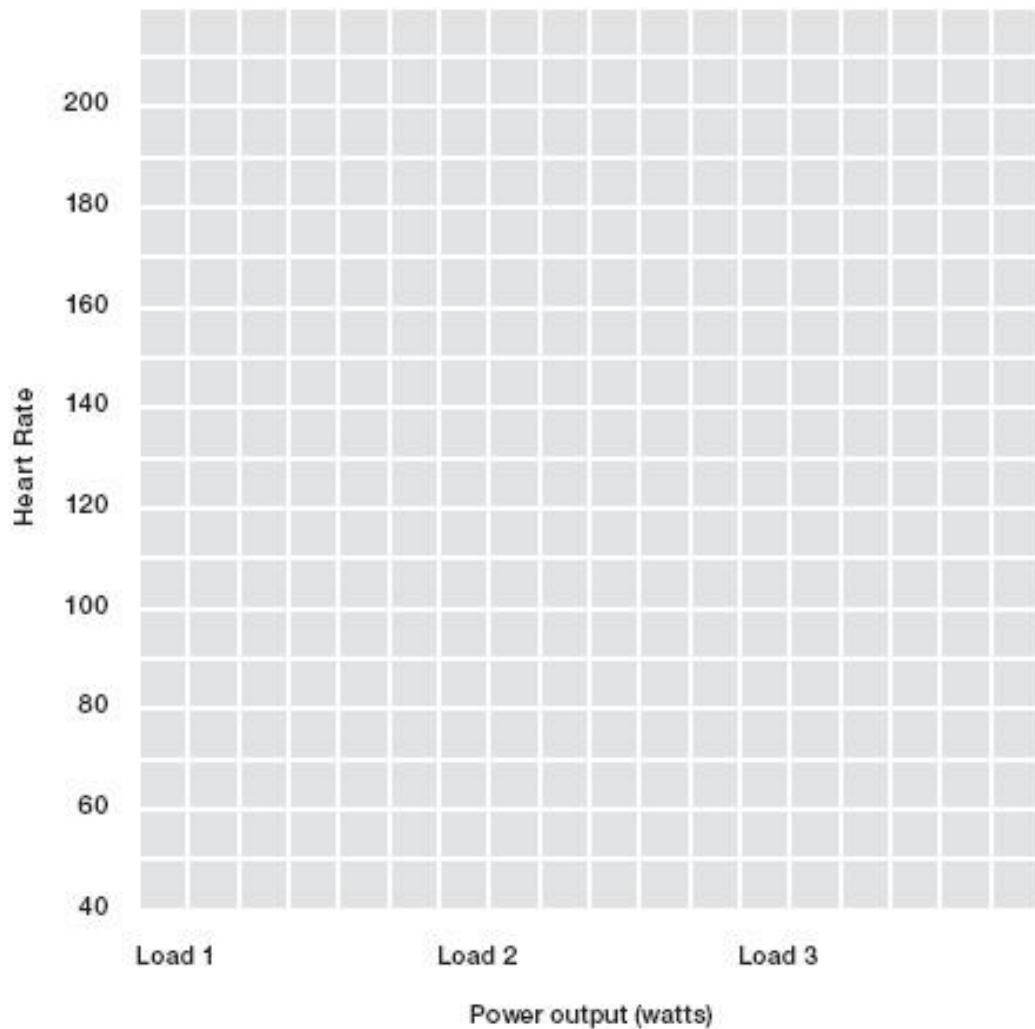
Female					
Name:			Date:		
	Pedal rate	Pedal resistance	Heart rate	RPE	Collection time
Stage 1 4 minutes	60 rpm	1.1 pounds			At end of stage
Stage 2 3 minutes	60 rpm	2.2 pounds			At end of stage
Stage 3 3 minutes	60 rpm	4.4 pounds			At end of stage
Cool-down 4 minutes	40 rpm	1.1 pounds			

Complete this test before beginning your six-week interval sprinting program. Set up your stationary bike as per the instructions in chapter 3. The aim is to complete three bouts of continuous cycling for a total of ten minutes: four minutes, three minutes, and another three-minute stage. Record your heart rate and rating of perceived exertion (RPE) at the end of the three exercise stages. Typical heart rates should be around 100 beats per minute during stage

one, 115 beats per minute during stage two, and 130 beats per minute during stage three for people in their twenties and thirties. For men and women in their forties and fifties, typical heart rates should be around 90 beats per minute during stage one, 105 beats per minute during stage two, and 120 beats per minute during stage three. For people in their sixties, heart rates should be about 80 beats per minute in stage one, 95 beats per minute in stage two, and 110 beats per minute in stage three. Your heart rate should not go above 140 beats per minute during the test.

Collect your data and then plot your heart-rate data on the graph in appendix C.

Appendix C: Monitoring Heart-Rate Change Using the Submaximal Fitness Test



If the submaximal test is repeated using the same workloads and under the same climatic conditions, the three heart rates at the three different pedal resistances will be lower if you have improved your aerobic fitness. Plotting your heart rates on this graph for a submaximal test repeated every three or four weeks should show a decrease in the heart-rate response. The decreased heart rate comes about because of increases in stroke volume and enhanced mitochondrial enzymes in the exercising muscles.

Appendix D: Rating of Perceived Exertion

Borg's RPE Scale

6	No exertion at all
7	Extremely light
8	
9	Very light
10	
11	Light
12	
13	Somewhat hard
14	
15	Hard (Heavy)
16	
17	Very hard
18	
19	Extremely hard
20	Maximal exertion

We'd like you to use this scale to measure how your whole body feels during exercise, considering the total amount of exertion, and including all sensations of physical stress, effort, and fatigue in your body. If you feel no exertion at all, you would choose number 6, and if you feel maximum exertion, you would choose number 20. If you feel somewhere in between, then you would choose a number between 6 and 20. Remember, this scale refers to your *whole body* exertion, not your legs specifically. You can use any number from the scale to describe how you feel, which is likely to change during your exercise time.